



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

H.A

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,504	02/17/2004	Peter W. J. Jones	TBRX-P01-004	7870
28120	7590	11/20/2006	EXAMINER	
FISH & NEAVE IP GROUP ROPES & GRAY LLP ONE INTERNATIONAL PLACE BOSTON, MA 02110-2624			SMITH, RICHARD A	
			ART UNIT	PAPER NUMBER
			2859	

DATE MAILED: 11/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/780,504

Applicant(s)

JONES ET AL.

Examiner

R. Alexander Smith

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,8,9,12-15,17 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,8,9,12-15,17 and 20-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20060828, 20061020</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed August 28, 2006 have been fully considered but they are not persuasive.

With respect to claim 1 and Brophy does not disclose or suggest adding a second color as argued on page 4: In response to applicant's arguments about Brophy individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Furthermore, Brophy was relied upon mainly for the teaching of the traffic light structure addressing a light source, reflection and/or in combination and the general geometry.

With respect to Kubo et al. and the auxiliary color: The examiner does agree that Kubo et al. generally addresses the greenish blue or blue color as an auxiliary color; however Kubo et al. also teaches that the color of blue-green and blue are used in order to assist color blind people to easily recognize the information displayed since these colors are more discernable to the color blind than ordinary green.

With respect to Brophy in view of Kubo et al., and Galella, as addressed in the argument

spanning pages 4-5: The examiner respectfully disagrees that changing the green light of Brophy to blue would render the signal unusable to both normal and color-blind viewers. Brophy discloses a traffic light to be placed at intersections to indicate direction of traffic movement, but does not address the type of traffic, i.e., vehicular or pedestrian, at the intersection. There is no technical reason why blue would not work in place of green or greenish blue if employed in a traffic light for drivers. It is a matter of convention, and likely regulation, that green and more recently greenish-blue are considered as the standard. Arguably, if blue is mounted in a normal traffic light in place of green then it still appears to the examiner that the driver would understand that the blue signal indicates go and therefore the reference of Brophy is usable. However for pedestrians, blue is the normal convention to indicate crossing and therefore Brophy is usable if the green light is replaced by blue for indicating directional movement of pedestrians at the intersection and since Brophy is silent as to the type of traffic.

Please note that U.S. 6,127,943 and U.S. 4,253,083 cited in the previous Office action disclose that blue is used for blind pedestrians to indicate walk.

With respect to Galella and amber: Brophy discloses that the annular color is preferably red and that the annular color serves to more clearly indicate the position of the signaling device. Galella is analogous in teaching that amber can be used as an annular color for effectively attracting attention and conveying information. Therefore it would have been obvious to modify the red first safety color, as taught by Brophy, to be another color such as amber, as taught by Galella, in order to select a color observable to normal people and more noticeable to those suffering color blindness in order to effectively attract attention and convey information.

Art Unit: 2859

With respect to Galella and blue: Please see the discussion above regarding Brophy in view of Kubo et al., and Galella.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1, 3, 8, 9, 12, 14, 17 and 20-22 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 1,616,604 to Brophy in view of JP 2001-14591 to Kubo et al.

Brophy discloses a safety indicator and a traffic light comprising a first color highly visible to an observer having ordinary color vision having a color bandwidth and central wavelength in the red spectrum (at 37), a second color (at 25) to an observer having a bandwidth and wavelength in the green spectrum, wherein the first color substantially surrounds the second color; at least one of the first safety color and the second color is produced, at least in part, by a reflection of a light source (at 38), the first color is deposited next to the second color.

Brophy does not disclose a first safety color having a color bandwidth and a central wavelength between about 580 and 600 nanometers, the second safety color being more perceptible by blue-sensitive photoreceptors of a retina of the observer than by other photoreceptors of the retina having a bandwidth and a central wavelength between about 440 and 490 nanometers; the first color having a bandwidth and a central wavelength between about 620 and 780 nanometers, the second color being more perceptible by blue-sensitive photoreceptors of a retina of the observer than by other photoreceptors of the retina having a bandwidth and a central wavelength between about 440 and 490 nanometers; the first safety color covers more of an area visible to the observer than does the second safety color, the second safety color covers less than about thirty percent of the area visible to the observer, the second color includes a wavelength in a range of about 445 nanometers, the bandwidth of the first color is greater than the bandwidth of the second color, the bandwidth of the second color covers less than about thirty percent of the visible spectrum.

Kubo et al. discloses that a greenish blue can be used as a predominate color [0010] and that blue can also be used [0020 and 0021] to help those having red-green colorblindness [0001]. Furthermore Kubo et al. discloses that the colors can be otherwise or in other combinations

[0019], that the invention may be applied to other devices [0022], differing displays having a second safety color being surrounded by a first safety color (figures 1 and 5-8), that red, green (figures 1, 5 and 6) in addition to blue can also be used as surrounding first colors and that red and green are hard to distinguish or see for those suffering from daltonism.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the indicator and light by replacing the green, taught by Brophy, with a greenish-blue color, as taught by Kubo et al., or by a blue color, as suggested by Kubo et al., in order to provide an indicator and a light that can be seen by normal and more noticeable to those suffering from daltonism.

Therefore for claims 1-4, 8 and 9, it would have been obvious to further modify the red first safety color, as taught by Brophy, to be another color, as suggested by Kubo et al., such as amber in order to select a color observable to normal people and more noticeable to those suffering from daltonism.

With respect to the particular color bandwidth and wavelengths in nanometers, i.e., between about 580 and 600 and between 620 and 780 for the first color, and between 440 and 490 for the second color, the second color includes a wavelength in a range of about 445 nanometers, and with respect to the bandwidth ratios, i.e., the first safety color covers more of an area visible to the observer than does the second safety color, the second safety color covers less than about thirty percent of the area visible to the observer, the bandwidth of the first color is greater than the bandwidth of the second color, the bandwidth of the second color covers less than about thirty percent of the visible spectrum: These limitations with respect to the bandwidth, the wavelengths, the coverage and the ratio of bandwidths are only considered to be the

"optimum" values of the amber or yellow-orange, red, and blue colors perceptible to a normal and color-blind human for the indicator and light disclosed by Brophy as modified by Kubo et al., as stated above, that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on obtaining the desired degree of noticeability for a normal sighted and color blind observer. See In re Boesch, 205 USPQ 215 (CCPA 1980).

With respect to claim 17, i.e., indicates a hazard: the intended use has not been given any patentable weight since the intended use does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

For the preambles of claims 1 and 12: The Applicant should note that the preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See In re Hiraio, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and Kropa v. Robie, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

3. Claims 2, 4, 13 and 15 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Brophy and Kubo et al. as applied to claims 1, 3, 8, 9, 12, 14, 17 and 20-22 above, and further in view of U.S. 6,054,932 to Gartner et al.

Brophy and Kubo et al. together teach all that is claimed as discussed in the above rejections of claims 1, 3, 8, 9, 12, 14, 17 and 20-22 except for at least one of the first safety color

and the second color is produced, at least in part, by a light source, and by a combination with the producing light source.

Gartner et al. discloses that color LEDs can be used to display information (abstract) and that advantages of LEDs including long life and less wattage to operate over conventional lamps. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the indicator and light, taught by Brophy and Kubo et al., by replacing the bulb with a corresponding color LED which produces color, e.g. red, as taught by Gartner et al., in order to reduce maintenance requirements and energy consumption.

4. Claims 1, 3, 8 and 9 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 1,616,604 to Brophy in view of JP 2001-14591 to Kubo et al. and U.S. 3,863,207 to Galella.

Brophy discloses a safety indicator comprising a first color highly visible to an observer having ordinary color vision having a color bandwidth and central wavelength in the red spectrum (at 37), a second color (at 25) to an observer having a bandwidth and wavelength in the green spectrum, wherein the first color substantially surrounds the second color; at least one of the first safety color and the second color is produced, at least in part, by a reflection of a light source (at 38), the first color is deposited next to the second color.

Brophy does not disclose a first safety color having a color bandwidth and a central wavelength between about 580 and 600 nanometers, the second safety color being more perceptible by blue-sensitive photoreceptors of a retina of the observer than by other

photoreceptors of the retina having a bandwidth and a central wavelength between about 440 and 490 nanometers; the first safety color covers more of an area visible to the observer than does the second safety color, the second safety color covers less than about thirty percent of the area visible to the observer.

Kubo et al. discloses that a greenish blue can be used as a predominate color [0010] and that blue can also be used [0020 and 0021] to help those having red-green colorblindness [0001]. Furthermore Kubo et al. discloses that the colors can be otherwise or in other combinations [0019], that the invention may be applied to other devices [0022], that differing displays have a second safety color being surrounded by a first safety color (figures 1 and 5-8), and that red and green are hard to distinguish or see for those suffering from daltonism. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the indicator and light by replacing the green, taught by Brophy, with a greenish-blue color, as taught by Kubo et al., or by a blue color, as suggested by Kubo et al., in order to provide an indicator and a light that can be seen by normal and more noticeable to those suffering from daltonism.

Galella discloses a safety indicator and traffic light wherein the first color is amber and surrounds a second color red or green (figures 1 and 2) in order to help those suffering from various forms of colorblindness to effectively attract attention and convey information (column 1, lines 3-7). Therefore it would have been obvious to modify the red first safety color, as taught by Brophy, to be another color such as amber, as taught by Galella, in order to select a color observable to normal people and more noticeable to those suffering color blindness in order to effectively attract attention and convey information.

With respect to the particular color bandwidth and wavelengths in nanometers, i.e., between about 580 and 600 for the first color, and between 440 and 490 for the second color, the first safety color covers more of an area visible to the observer than does the second safety color, the second safety color covers less than about thirty percent of the area visible to the observer: These limitations with respect to the bandwidth, the wavelengths, the coverage and the ratio of bandwidths are only considered to be the "optimum" values of the amber or yellow-orange, red, and blue colors perceptible to a normal and color-blind human for the indicator and light disclosed by Brophy as modified by Kubo et al. and by Gallela, as stated above, that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on obtaining the desired degree of noticeability for a normal sighted and color blind observer. See In re Boesch, 205 USPQ 215 (CCPA 1980).

For the preamble of claim 1: The Applicant should note that the preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See In re Hirao, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and Kropa v. Robie, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

5. Claims 2 and 4 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Brophy, Kubo et al. and Galella, as applied to claims 1, 3, 8 and 9 above, and further in view of U.S. 6,054,932 to Gartner et al.

Brophy, Kubo et al. and Galella together teach all that is claimed as discussed in the above rejections of claims 1, 3, 8 and 9 except for at least one of the first safety color and the second color is produced, at least in part, by a light source, and by a combination with the producing light source.

Gartner et al. discloses that color LEDs can be used to display information (abstract) and that advantages of LEDs including long life and less wattage to operate over conventional lamps. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the indicator and light, taught by Brophy, by replacing the bulb with a corresponding color LED which produces color, e.g. red, as taught by Gartner et al., in order to reduce maintenance requirements and energy consumption.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2859

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. Alexander Smith whose telephone number is 571-272-2251. The examiner can normally be reached on Monday through Friday from 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'R. Alexander Smith', with a long horizontal stroke extending to the right.

R. Alexander Smith
Primary Examiner
Technology Center 2800

RAS
November 13, 2006